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ABSTRACT

The evaluation of gross human behavior, its measurement and assessment are discussed. The four-stage approach to behavioral analysis (specification, intervention, assessment, and prevention) is described, using criminal behavior as a case in point. An example is given of assessment-intervention reciprocity, and the three levels of behavioral measurement (immediate, intermediate, and ultimate) are discussed. The pervasive role of generalization in intervention assessment is indicated, and the task of predicting recidivism as the criterion is pointed out. The direct and indirect ways of observing human behavior are presented, and the 10 basic dimensions of behavioral measurement are given. The six-stage process of behavioral research is given, and the prediction of recidivism is related to the Environmental Deprivation Scale, which serves as a door-opening device for intervention. (DB)

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Prolegomena to the Measurement and Assessment of Human Behavior

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August 12, 1971

ABSTRACT

These prefactory notes and comments deal with some basic dimensions and questions in the evaluation and measurement of human behavior in its natural habitat as a means of both identifying and assessing intervention and treatment programs for changing behavior. The ultimate goal is prevention of deviant behavior such as crime. The pervasive thread and ubiquitious principle is generalization.

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GERTRUDE STEIN: "WHAT IS THE QUESTION?"

The focal point of these notes is the evaluation of gross human behavior, its measurement and assessment. The need to understand human behavior provides its own rationale.

The emphasis in the study of human behavior is most often on deviancy because deviant behavior is easy to spot. The term *deviancy* relates only to expected or actuarial frequency: a deviant event is an unusual one. Most people are not alcoholics, for instance, so the alcoholic becomes the deviant. But so are members of Congress. The concept has little to do with the *abnormal*. The latter presupposes a generalized definition of its counterpart, the *normal*, and such a definition is hard to come by.

In the present context, a variety of research dimensions to the problems of deviant behavior will be treated. The particular vehicle will be that form of deviant behavior known as *criminal*. The messages, however, have generality to various forms of deviant behavior such as *mental illness*.

THE FOUR-STAGE APPROACH TO BEHAVIORAL ANALYSIS

The process of experimentally examining any category of human behavior is a four-stage one: *specification, intervention, assessment* and *prevention.* Each of these will be discussed in the following paragraphs.

1. The first order of business is *specification*. The behavior under experimental scrutiny must be identified and given measurement status. It is not merely a matter of putting

the verbal finger on a behavioral phenomenon and providing a convenient label. To call something "schizophrenia" is saying less than nothing. The behavioral particulars must be given, and the specific patterns that differentiate a given reaction complex from others must be clearly earmarked. In large addition, there must be specification of the environmental circumstances under which the behavioral event occurs. (This is a major research undertaking about which more will be said in a later section.) Without knowledge of the stimulus correlates of behavioral events, there can be no prediction of the events and only blind stabs at intervention and prevention.

2. Once the behavior patterns and their environmental correlates have been clearly (measurably) identified, *intervention* may proceed. Specification sets the stage for intervention. The measurement of the behavior provides the springboard into specific areas of *treatment*. For instance, the data suggest that released offenders have difficulty acquiring and maintaining employment. The first problem focuses on a determination of the behavioral "why." A beginning answer to this difficult question points the way to intervention that cuts back on the problem.

3. After intervention, *assessment* is essential. Intervention without assessment is like "one hand clapping." Clearly, measurement of treatment effects may be immediate or more long-range. It is of considerably more consequence that a person change in the long rather than the short haul, although the latter may be basic to the former. At this juncture, we have come full circle. We started with behavioral measurement and we have come back to it. But the long-range ideal objective is to do away with the particular form of deviant behavior. Measurement and intervention provide the bases for the next step.

4. After replication, refinement, and recycling in measurement and intervention, the program is ready for the beginning of *prevention*. We have detailed knowledge of the historical and contemporary antecedents and correlates of the behavioral deviancy. Programs focus on alterations in these so that the deviant behavior will be prevented from occurring. This is clearly a long-range goal and difficult to achieve. The three prior prongs set the stage for it.

As a terminal note to this section, it might be commented that in such areas as criminal behavior and *mental illness*, we have only begun to scratch the surface of the first phase of this four-stage process. We are just starting to identify the actual behavior patterns involved and only beginning to uncover some of the basic dimensions and environmental circumstances associated with them. Intervention is in the infancy stages, e.g., "psychotherapy." There is a long, exciting research row to hoe.

A CASE IN POINT: CRIMINAL BEHAVIOR

Criminal behavior makes a most convenient vehicle for spelling out the highlights of the previous section. It, unlike "schizophrenia," is based on rather concrete, objective behavior. The specification of the precise details of the act of crime are, however, merely the beginning of the experimental analysis path. The actual law violation, while hardly trivial, is only a small part of the initial message. It is essential to determine the exact circumstances leading to commission. Was it planned or spontaneous? Was it done alone or with a peer group? Was the individual employed at the time? What were the detailed environmental circumstances surrounding the act? These are rather general questions that constitute merely door-openers to the precise behavioral specifics. We need to know in exact detail the person's stimulus circumstances with regard to employment, education, interpersonal relationships and the like.

There are a series of inputs or checkpoints that require the collection of detailed behavioral information. Among these may be mentioned:

- Early life experiences, particularly parental behaviors
- Pre-criminal behavioral history
- Criminal history with particular emphasis on circumstances preceding the criminal act
- Prison behavior patterns and institutional adaptation
- Pre-release modes of behavioral functioning
- Postrelease environment and reaction patterns

It is clearly arbitrary to divide up this continuous process, but focus on these critical periods has a theoretical as well as a practical basis.

The procuring of hard data is not an easy matter. Direct observation is ideal, but unfeasible. A carefully conducted research (rather than clinical or counseling) interview stressing behavioral facts does the job especially when coupled with checks of collaterals law enforcement agencies, and other sources. More will be said of this point in a later section.

From the background data and current functioning, one is in a position to write a fairly detailed behavioral diagnosis. Deficits become obvious along with behavioral strengths. From this behavioral diagnosis, a prescriptive regimen can be derived that leads to specific intervention for a particular individual. (Fortunately, many persons have common deficits so that group intervention in, say, education is feasible.) We have rough

and ready labels for these deficits and their corresponding interventions: education, employability, personal and social skills, etc. In addition, high-level constructs such as self-management, responsibility and self-concept come into play. Clearly, some of these matters have much more behavioral reference than others. All can, however, be given behavioral status with more thorough analysis.

Systematic assessment of behavioral changes during and after intervention is essential, not merely for evaluation of treatment, but more basically to provide leads for future, additional intervention. Such checkouts, perforce, include long-range follow-up of the individual (with supervention where necessary) after he is released from the institution. The "pay-off" from intervention lies in its generalized effects on postrelease behavior. For instance, does the treatment procedure reduce recidivism? Such outcomes are the warp and the woof, the *raison d'etre* of intervention. The long-range goal is crime reduction and prevention; the short-term objective, a decrease in recidivism.

After this cycle of measurement and intervention is repeated with increasingly refined variations, the researcher may begin his preliminary steps toward a prevention program. It is, of course, not possible to specify the direction it will take. The entire educational system may require revamping or detailed community retraining and education programs for parents may be called for or both or many other procedures. The specifics will emerge in the experimental wash.

This presentation of the analysis of criminal behavior is not intended as thorough or definitive, but merely as an overview suggestion of the machinery of the process. As such, it may help pinpoint some problem areas.

AN EXAMPLE OF ASSESSMENT-INTERVENTION RECIPROCITY

In working with prison inmates one is apt to notice that their speech is substandard in many ways. The question arises about the relationship of verbal behavior to social and occupational "success." One might proceed to set up an experimental program to treat one group (6-8) and not to treat a comparable comparison group, pre- and posttesting both groups. One might start with punctuation and spelling as the curriculum. The two groups would be compared immediately on the posttest, intermediately by checking on changes in conversational speech and reading material, and more ultimately in terms of job procurement and continuation. Such a study is likely to yield significant differences on the first measures and insignificant on the other two, more basic criteria. This "failure" would feed back into intervention and a new program started involving discussion seminars

pinpointing verbal behavior appropriate to the situation at hand--social, occupational or whatever. Again, the several stages of assessment would occur, and it is quite possible that the teaching (reinforcing) of "situational" speech would generate a significant and persisting difference in occupational behavior. The study would, of course, be replicated on another small sample.

In a sense the purpose of such a program is to provide inmates with a tool (language) for coping with problems and dealing with people.

THE THREE LEVELS OF BEHAVIORAL MEASUREMENT

It should be noted at the outset that instrument development and behavioral assessment fall into two rough classes of events. There are those cases first that require the evolution of a specific measuring device to record the particulars of a limited behavioral event. Subject-matter examinations in individual programmed instruction are of this variety. The second type deals with more all-purpose instruments that evaluate gross and generalized aspects of behavior and sometimes come to be labeled indices of "adjustment."

Behavioral measurement is an integral ingredient of intervention; only with assessment does a "treatment" program acquire behavioral meaning. The basic mensuration problem is when and how to take the measurements.

There are three basic criterial levels or points of intervention impact and assessment: *immediate, intermediate* and *ultimate*. Immediate criteria refer to behavioral measurements while the training program is in progress or immediately after its completion. Intermediate criteria deal with measurements taken at a later time or in a different context from that of training. They deal also with the short-range persistence or retention of training effects. More ultimate criteria focus on the long-range, lasting generalized effects of intervention, the extent to which the built-in behavior patterns persist and generalize to a wide variety of situations. These three criterial levels obviously fall on a continuum and shade over into one another.

This three-way distinction may also be considered one of generalization or transfer. Immediate measurements are taken in the training setting while intermediate and more ultimate ones are achieved in contexts temporally and situationally remote from the original training setting.

An example may help pinpoint this matter. As previously noted, one of the major deficits of prison inmates is verbal skill. This category includes substandard grammar, inability to make conversation, and inappropriate situational speech. Intervention might

consist of building in more standard speech by way of teaching English by second-language techniques. Immediate criteria would consist of determining the degree of difference in speech habits of a trained group as contrasted with a non-trained one. Intermediate criteria might be illustrated by the demonstration that speech training effects generalized to written language, daily conversation, and type of reading material. Behavioral measurements constituting more ultimate criteria might lie in such generalized areas as increased employment, greater job achievement, increases in self-concept, substitution of verbal for physical attack and, very basically, lack of recidivism.

The subtle aspects of measurement lie in deciding in what areas and along what dimensions to make the assessments. There are no cut-and-dried answers to this question. The investigator must scrutinize and analyze his setting, searching for direct and indirect sources for assessing the impact of his intervention. The ultimate objective of retraining in a correctional setting is obvious: the return of the individual to the "free world" with such built-in behavioral alterations that he is able to cope with societal problems without recourse to crime.

THE PERVASIVE ROLE OF GENERALIZATION

The intervention-assessment dichotomy is actually a complex closed circular circuit where behavioral measurement feeds back into intervention so that more effective behavioral change treatment procedures are developed. These in turn call for refinement in the measuring instruments. This sequence is repeated a number of times until the ceiling of cost-efficiency is approached.

The ubiquitous, pervasive common thread permeating intervention assessment is generalization or transfer. The ideal institutional treatment program so changes the in-prison behavior patterns that there is maximal carry-over to the "free world." For instance, the inmate is trained to self-manage his contingencies in such a way that he seeks out as friends only those people who reinforce acceptable behavior and thereby does not recidivate. In practice, of course, this situation rarely prevails, but this basic matter must be emphasized in the design and development of both treatment programs and assessment measurements. Changing specific behaviors in the institutional context is almost a routine matter. By no means routine is so changing the prison behavior that it becomes "a way of life" carried over into postrelease performance.

THE CRITERION IS A CONTINUUM

In the continuing give and take between assessment and intervention there lies the obvious psychometric problem of predicting a criterion. The ultimate criterial behavior in crime is, of course, the commission of crime. We need to earmark beforehand which individuals will commit crimes and which will not. But this is the long-range prevention job. The more immediate task consists of predicting recidivism as the criterion. In other words, measuring and assessment instruments need to be developed that will pinpoint the individuals more likely to recidivate. The discussion leads into the main point.

Nature is rarely dichotomous. Life and death appear to be one ultimate case, but even here there are degrees of acting and reacting. Again sex is considered a dichotomy, but behaviorally there are many degrees of masculine and feminine reaction patterns. Recidivism is a clear case in point. We talk of it as a dichotomy, but it is far from that. There is an underlying continuum of law violation. The basic behavioral question concerns the degree, intensity or severity of law violation. The latter can be scaled in degree from quite minor and commonplace to rare and major. Examples ranging from the former to the latter include traffic violations, fighting, public drunkeness, technical parole violations (e.g., associating with known criminals), minor crimes with sentences of 30-90 days, more major crimes with sentences of more than a year and finally, life imprisonment.

The point is an obvious one and need not be belabored. Dichotomizing individuals with known criminal histories into two groups of recidivists and non-recidivists is convenient. But the underlying continuum of severity of law violation must be taken into account.

A comment is called for regarding the nature of the concept of revidivism. In synopsis form, the working definition of it can be put in quasi-equation terms:

$$R = f\,(C + I + E)$$

In words, recidivism is a direct function of the combined effects of the crime (C), the individual (I) and the environment (E). Each of these, in turn, breaks down into components. Crime, for instance, can be defined along the dimensions of type and "severity" or duration of sentence. We have previously discussed the dimensions of the individual including his criminal and non-criminal behavioral history and his current functioning. There are clearly many facets to environmental input to the individual. These serve as sources of support or deprivation influencing his behavior patterns. They include occupational, social, family, interpersonal, organizational, and avocational influences. (Details of a scale for assessing environmental deprivation are presented in a later section.)

The overall point that the behavioral world is rarely dichotomous has generality. Two-way breakdowns such as pass-fail and success-failure are clearly arbitrarily superimposed on underlying continua ranging from a small to a large degree of the specified behavior pattern.

MAN'S FACETS AND FOIBLES

There are various ways of classifying and categorizing human behavior--all of them arbitrary. We have already indicated one continuum, namely, deviant behavior, but this category is *per se* multidimensional and complex. Certain forms of human action are clearly psychologically grounded and behaviorally measurable, e.g., crime, "mental illness" and alcoholism. Others are widely accepted as involving psychological factors, e.g., various "psychosomatic" problems such as ulcer. But who is to say at this stage of the research game that other basic matters such as terminal cancer are not behaviorally and psychologically based?

Man is a behaving organism and as such his actions and reactions can be classified into such categories as sensori-motor performance, learning ranging from simple to complex, verbal behavior in its direct and more subtle forms, emotional behavior with all its ramifications and social patterns involving myriad interpersonal relationships. Such a breakdown is a starting point, but there remains the tremendous problem of complex human behavior in its natural habitat. Behavioral definition in direct measurement terms must be given such concepts as "sense of responsibility," self-management, and self concept. These are by no means obvious matters and require continuing experimental and conceptual vigilance. To say that an offender lacks a "sense of responsibility" means little from a behavioral standpoint. Particular reaction patterns must be specified giving the concept behavioral meaning.

Pascal and the writer (1961) after extensive experimental examination found it both convenient and systematic to divide the behavioral world into three parts: Stimulus Categories, Responses to Known Stimulus Categories and Operant Responses. The first contains the behavior of known people (e.g., parents) toward *S* at any point in his life along with commonly encountered environmental circumstances such as school, job, and subculture. Each of the "people" categories is studied by interview in terms of a number of variables including frequency of contact, activities, displays of affection, and punishment exhibited by the stimulus category toward *S*. *S*'s responses in turn are examined along such dimensions as adience-abience, copying, competitive behavior and agressive behavior.

Operant Responses include those behaviors for which specific, eliciting stimuli cannot be identified (although the conditions of reaction are available). These include oral habits of eating and drinking, sleeping, elimination, motility, cleanliness, and sexual and social behaviors. Each of these response classes is assessed along a number of measurement dimensions including frequency, intensity, and duration. (These dimensions are treated in a later section.)

Many recent practictioners of behavioral technology, especially behavior modification specialists, have found it feasible to concentrate on current, specific behavior classes deemphasizing both the stimulus setting for the behavior and its historical development. Pascal and I, on the contrary, have found a complete accounting of current behavioral functioning to require a detailed specification of all three categories. A major portion of current, adult malfunctioning can, in many instances, be accounted for by early-life experience in terms of parental behavioral input.

Clearly little more can be done at this juncture than to raise the questions. The beginning answers come only with concerted intellectual and experimental effort.

THE DIRECT AND INDIRECT OBSERVATION OF HUMAN BEHAVIOR

There are two basic ways by which human behavior is observed and measured: direct and indirect. In the former case, an observer is present and records the ongoing behavior. This method is sometimes used although the major problem arises of distortion of data by intrusion of the observer on the behavior observed. This point is particularly valid for sensitive, personal areas of human endeavor such as sexual behavior.

On some occasions variations on the direct observation theme are introduced by way of video and/or tape recording. The same limitation as noted applies since the *S*s must, of course, give permission for the use of these supplements.

The indirect method of observing human behavior consists of the interview. A basic distinction must be made between the clinical or counseling interview on the one hand and the research or data collecting interview on the other. They have in common the establishment of a relationship with the interviewee, but otherwise diverge. The clinical interview is supportive and aims at aiding *S* to solve problems. The research interview, on the contrary, focuses on information gathering. Verbal behavior that adheres to and describes a variety of daily reaction patterns is shaped and reinforced. Kinsey, Flanagan and Murray have been the primary exponents of this approach. Following from their work Pascal and Jenkins have developed the concept of the Behavioral Incident (BI) defining

the initiation, continuation, and termination of a specific episode of behavior in a particular stimulus setting.

Various criticisms are leveled at the interview on both reliability and validity grounds. Following the behavioral model just outlined obviates these criticisms. The interested reader is referred for evidence on this point to the Pascal-Jenkins book, *The Systematic Observation of Gross Human Behavior* (1961). In this tome is presented a considerable body of data relating early life (behavioral) experience to adult deviant behavior in such areas as skidrow alcoholism and ulcer intractibility.

As a terminal comment, it should be noted that since there is no alternative to the interview, it is highly desirable to conduct it in such a fashion as to maximize behavioral feedback. The Behavioral Incident and its accompanying procedure do this job.

THE TEN DIMENSIONS OF BEHAVIORAL MEASUREMENT

There are 10 basic dimensions of all scientific measurement including the behavioral:

Frequency	Amount
Latency	Variety
Rate	Direction
Duration	Conditions
Intensity	Quality

The first five of these are the classical ones recorded in the standard units of centimeters, grams and seconds. The second five are somewhat less traditional but equally basic in some instances. Short, rough working definitions of each dimension follow.

Frequency is the number of occurrences of a behavioral event in a fixed period of time, usually of long duration, e.g., an hour. Sometimes it is measured in percentage terms, proportion of occurrences in total opportunities. It is the bedrock index since if frequency is zero, no measurable behavior occurs.

Latency refers to the time interval elapsing between stimulus presentation and onset of response. Classical reaction time is the best known case.

Rate measures speed of response usually over short durations. An index of it is the slope of the cumulative response curve in the Skinner box. Rate is sometimes used interchangeably with frequency.

Duration refers to the length of time over which the response persists.

Intensity refers to the degree, severity or effort required of a response.

Amount involves a "how much" dimension and includes such indices as amplitude. It may relate to intensity.

Variety refers to the ways in which the behavior occurs or is expressed. It specifies the class limits of the behavior.

Direction has to do with the portions of the environment toward which *S* responds selectively or discriminately.

Conditions covers the environmental (stimulus) circumstances under which the behavior takes place. It relates in part to direction.

Quality refers to the correctness, appropriateness or expectedness of the particular behavior.

Different measures are applicable to different classes of behavior. For sleeping, for instance, duration or amount is the primary index, but information is also collected on frequency, conditions, and variety including dreams.

Talking behavior provides a convenient vehicle for the illustration of the measures. Frequency of talking per hour (or day) may be recorded. How fast *S* talks is rate. Loudness level reflects intensity. On any given talking occasion the length of talking is duration. Reaction time in response to questions constitutes latency. Other aspects of talking concern conditions, to whom or to what conversation is directed, different modes of verbal behavior (variety) and appropriateness of speech (quality).

Other daily behaviors and their primary measures include eating (frequency, variety and amount), sex (frequency and variety), exercise (variety, frequency and intensity), and voting behavior (direction and latency).

In the correctional context, the measurement of recidivism is a further illustration of the application of the dimensions of measurement. Frequency of crime behavior is certainly a basic dimension. Type of crime must also be considered. It, of course, reflects variety. (Direction and variety converge in this case.) The other primary dimension, as previously mentioned, is severity of offense, an intensity index.

THE BASIC INGREDIENTS OF RESEARCH

Behavioral measurement is self-contained, but becomes more meaningful when put in the context of systematic observation, the heart of the research matter. Research consists of measuring behavioral changes as a function of systematic variation in environmental conditions. But there is a lot more to it than that. Here we will merely give a synopsis.

For details, the reader is referred to Jenkins and Hatcher, *The Design of Behavioral Experiments* (1971).

Research in essence is a six-stage process as follows:

1. *Idea conception and problem selection*. It is crucial that the investigator ask basic questions. Trivial problems, no matter how elegantly handled, generate inconsequential results.

2. *Translating ideas into experimental action*. Considerable skill is required in selecting the experimental treatment, the behavioral measurement and variables for control action. Slippage in any of these can invalidate results for the experimental question at hand.

3. *Experimental execution*. Results are a function of research conduct, especially of the behavior of the experimenter.

4. *Data processing and analysis*. Contrary to some thought, statistics are quite secondary to research design. They should serve to simplify and clarify behavioral outcomes.

5. *Interpretation*. The behavioral changes (including the analysis) must be interpreted in the light of the experimental question asked at the outset.

6. *Communication*. The final and basic stage in the process is to transmit the informational messages of the whole sequence.

In brief, these steps are what research is all about.

THE PREDICTION OF RECIDIVISM

An illustration of the effectiveness of human behavioral measurement lies in the application of the Environmental Deprivation Scale (EDS) to the prediction of recidivism in criminal behavior. The EDS is a 16-item scale measuring degree of environmental support or deprivation and at the same time degree of behavioral deviancy. (It was originally developed by Pascal and Jenkins in 1958.) Information for its execution is derived from a behaviorally oriented interview based on using the Behavioral Incident technique. Each item is scored "0" or "1", the latter indicating deprivation, the former support. The 16 items of the EDS are: Employment, Income, Debts, Job Participation, Job Status Status--Other (Hobbies), Education, Residence, Church, Other Organizations, Friends, Relatives, Parents, Wife, Children and "Fear." (The last item deals with *S*'s expressed concern with his ability to cope with his everyday problems.) The manual describes the specific bases for scoring each of the EDS items. A total score is derived from the EDS by summing the number of "1" scores, yielding a total deprivation (or deviancy) score.

EDS total scores were available on a sample of 50 recidivists where the EDS was applied just prior to the commission of the new crime. EDS scores were also available on a comparison sample of 50 non-recidivists. This latter sample was comparable to the recidivists along such dimensions as age, education, and vocation.

The descriptive data from the EDS scores of the two samples of 50 are summarized in Table 1. A quick scan of this representation indicates a clearcut separation of the two samples with the recidivists showing high EDS scores and the non-recidivists low ones. Thus the recidivists were subjected to considerably more environmental deprivation than the non-recidivists.

An interpolated note is needed at this point. The EDS, while assessing degree of environmental input in terms of support or deprivation, at the same time indicates the degree of behavioral deviancy on the part of *S*. Environmental deprivation is a two-way street: *S* responds according to his environmental input and vice versa.

It is noteworthy that 80% of the recidivists shown in Table 1 yielded EDS scores of 11 or higher while 82% of the non-recidivists scored 8 or below. Put another way, 92% of the recidivists show higher scores than 82% of the non-recidivists.

Statistical processing and analysis of data are efficient only when they directly reflect what can be seen in the data by inspection. The bottom portion of Table 1 follows this rule. Here the two samples of 50 each have been sorted into high and low groups using the cut-off of the middle of the EDS. The partitioning of the recidivists from the non-recidivists is quite apparent. The Coefficient of Association, Q, has been applied. It indicates the extent of covariation between presence or absence of recidivism on the one hand and EDS score on the other. The emergent value of .96 is not merely statistically significant but indicates an extremely high degree of association.

The generality of applicability of the EDS is indicated by the contents of Table 2 which contains data collected by Pascal, the writer and their associates in a series of investigations of various forms of behavioral deviancy. In all studies except the prison releasees, behavioral data were collected concerning parental behaviors early in *S*'s life. The degree of deprivation was assessed and its rank order is included in Table 2.

The overall picture is clear. The EDS serves as a highly valid indicator of degree of behavioral deviancy as reflected in environmental deprivation. A further point worth noting is the perfect correlation between adult deprivation and deviancy on the one hand and early-life deprivation of parental input on the other.

TABLE 1

The Prediction of Recidivism by the Environmental Deprivation Scale (EDS)

EDS Score	Recidivists N = 50	Non-Recidivists N = 50
13 - 14	20	0
11 - 12	20	3
9 - 10	6	6
7 - 8	2	7
5 - 6	2	24
3 - 4	0	10
Mean	11.8	6.3
Median	12.6	6.3
Range	5-14	3-11

EDS Score	Recidivists	Non-Recidivists
High (9-16)	46	9
Low (3-8)	4	41

Note.--Coefficient of Association: Q = .96
P = < .0001

TABLE 2

Mean Environmental Deprivation Scale Scores for Various Forms of Behavioral Deviancy

Behavioral deviancy	N	Mean EDS score	Rank of early-life deprivation
Skidrow alcoholics	19	12.6	1
Prison recidivists	50	11.8	
Non-ulcer intractibles	10	10.3	2
Ulcer intractibles	59	10.0	3
Schizophrenics	20	8.1	4
Middle-class alcoholics	10	7.6	5
Terminal cancer cases	10	7.5	6
Prison non-recidivists	50	6.3	
Ulcer surgical successes	93	5.2	7
Control cases	89	3.4	8

One comment is basic. The EDS serves as a door opening device for intervention. The assessment reflected in the EDS indicates the areas of behavioral deficit for which intervention techniques must be devised. In passing it should be noted that in the case of recidivists, occupational, interpersonal and institutional deprivations are all high. Overall, the EDS serves as a detection device for intervention as well as a criterion of environmental deprivation and behavioral deviancy.

ESCHATOS

Behavioral assessment, measurement, and evaluation are at one and the same time the starting and terminating point for intervention and treatment programs for deviant behavior, be they criminal or otherwise. Initial assessment specifies the behavior for preliminary intervention; follow-up measurement detects additional behaviors for treatment as well as evaluating initial intervention. Recycling continues with behavioral measurement playing the pivotal role and generalization the pervasive thread.

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